ABSTRACT

This document presents two interrelated studies on the marine fisheries of the People's Republic of China, both emphasizing, if in different ways, the magnitude of the catches reported throughout the 1990s.

The first study, by Lillian Pang and Daniel Pauly, titled "Chinese Marine Capture Fisheries from 1950 to the late 1990s: the Hopes, the Plans, and the Data," reviews the history and development of Chinese marine fisheries since 1950, notably the extremely strong increase of reported catches from the mid-1980s on. The case is then made, based on the design of the statistical reporting system, and the professional motivation structure of local fisheries officials, that over-reporting is likely to be the cause for much of the nominal catch increase. Supporting evidence is provided by similar over-reporting in other food-producing sectors, by various other fisheries studies (notably of catch per effort trends), the stressed state of Chinese coastal ecosystems, and the proclamation, by China's Central Government, of a zero-growth policy designed to undermine local over-reporting and to restructure the fisheries sector.

The second study, by Reg Watson, titled "Spatial Allocation of Fisheries Landings from FAO Statistical Areas 61 and 71" describes a rule-based, computer-intensive algorithm developed by the author and associates to map the world's fisheries catches in ½ degree cells. The resulting global map, which suggests the Chinese shelf and adjacent waters to be as nearly as productive as the Peruvian coastal upwelling system, was broadly reproduced by a General Additive Model that used depth and primary production as predictor variables. The catches reported from Chinese marine waters explained a large fraction of the differences between observed and predicted values, strongly suggesting that current Chinese nominal catches are greatly over-reported.

These two studies thus confirm each other, and provide strong evidence that indeed, Chinese national statistics over-report marine catches from Chinese waters. The internal adjustments that correcting for the underlying deficiency of the statistical reporting system will require are not investigated, and nor are the food policy issues implied by these findings. It is clear, however, that these issues are serious, for both China and the rest of the world, thus explaining, if need be, the critical tone of our studies. It is hoped that the Chinese authorities, international bodies, concerned scientists and others will find harmonious ways to resolve these issues.